

REMARKS

Applicant appreciates the suggestions offered by the Examiner to overcome the objections to Claims 4 and 17. Applicant has submitted a Terminal Disclaimer herewith to overcome the provisional, nonstatutory obviousness-type double patenting rejection of Claims 1-3, 5-16, and 18-24.

Applicant's invention comprises components (i.e., bypass channel, diffuser, and/or contraction) that are completely external to the perimeter of the disk. No portion of these components extends radially inward beyond the outer diameter of the disk. As noted by the Examiner, the components come close to the disk (e.g., approximately 0.5 mm) as stated in Claims 4 and 17, but they do not penetrate the rotational area defined by the disk.

Claim 1 was rewritten to highlight this difference by requiring the diffuser to be "located in the bypass channel" (which itself is external to the disk) "adjacent to a downstream side of the disk and offset and completely spaced apart from the disk in the radial direction." The diffuser does not radially overlap any portion of the disk.

In contrast, the *Subramaniam* reference clearly shows and describes its diffuser 18 as extending "from near the outer diameter 32 to near the inner diameter 30 of the storage disks 26." Figs.1 and 2; and col.4, lines 66-67. Every embodiment of *Subramaniam*'s diffuser 18 radially overlaps its disks. Thus, the new language of Claim 1 clearly distinguishes this reference. The other reference, *Imai*, merely stands for the proposition that a bypass channel can extend around a perimeter of the disk drive. *Imai* does not contain any description of a diffuser or contraction whatsoever. Claim 1 is not obvious in light of the cited references since, at best, their combination would only provide a disk drive with a fully bypass channel and a single diffuser that extends radially inward between the inner and outer diameters of the disks. Claim 1 is now in condition for allowance.

Claim 2 further distinguishes the cited references by requiring the diffuser to have "an air filter for filtering the air flowing through the housing." At most, *Imai* only discloses a filter 60 in

its upstream bypass channel 45c. Again, *Imai* has no diffusers or contractions, and its combination with *Subramaniam* would still be limited to a filter in the upstream portion of its bypass channel, which is the opposite side of Applicant's diffuser location. Claim 3 modifies Claim 2 to require the air filter of the diffuser to incorporate "electrical charges to filter the air flowing through the housing." *Imai* is silent on its type of filter, and *Subramaniam* has no filter whatsoever.

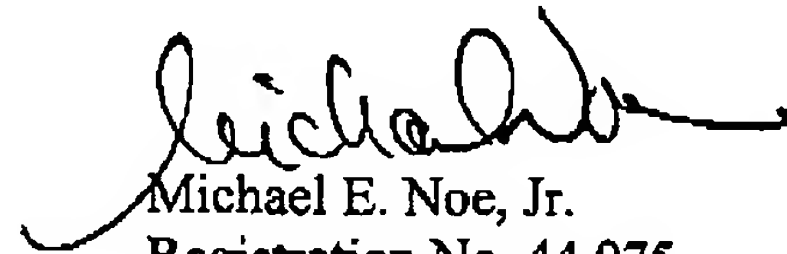
Claim 6 requires the diffuser to be "a comb-like structure having a pair of axially-oriented side walls and at least one air foil extending between the side walls." In contrast, *Subramaniam* clearly states that its "diffuser wings 58 extend and cantilever from the diffuser support 56." Col.4, line 64. By definition, the term cantilever means that the wings 58 are completely unsupported on their opposite ends and thus cannot have a "pair" of supporting side walls as required by Claim 6.

Claim 7 states that the diffuser air foil is "axially aligned with a planar orientation of the disk." *Subramaniam* cannot satisfy this element since its wings 58 are interleaved—not aligned—with the disks. Moreover, Claim 7 also requires the air foil to have "a maximum axial thickness that is less than or equal to an axial thickness of the disk." *Subramaniam* is silent on this element. Claims 8-11 ultimately depend from Claim 7 and add additional elements that are impossible to satisfy with the cited combination of references.

Claim 12 adds "a contraction located in the bypass channel adjacent to an upstream side of the disk and offset from the disk in the radial direction." *Subramaniam* only contemplates a diffuser, not a diffuser and a contraction, and its diffuser is not radially offset from its disks. The rejection of the remaining Claims 14-24 is overcome with the concurrently submitted Terminal Disclaimer.

It is respectfully submitted that the present application is in condition for allowance and favorable action is requested. No fee for an extension of time or other fees are believed to be required. However, in the event that one or more fees are required, please charge them to **Hitachi Global Storage Technologies' Deposit Account Number 50-2587.**

Respectfully submitted,



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